

## TWO NEW SPECIES OF THE GENUS *CLOACINA* (NEMATODA: STRONGYLIDA) FROM THE TAMMAR, *MACROPUS EUGENII*

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### Summary

MAWSON, P. M. (1974).—Two new species of the nematode genus *Cloacina* (Nematoda: Strongylida) from the Tamar, *Macropus eugenii*. *Trans. R. Soc. S. Aust.* 99(1), 39–41, 28 February, 1975.

*Cloacina smalesae* and *C. kartana* are from the stomach of *Macropus eugenii* from Kangaroo I. *C. smalesae* is distinguished by the shape of the leaf crown elements, postoesophageal excretory pore, swollen cuticle at the anterior end of the body, and a long vagina. *C. kartana* is distinguished by the very small cephalic papillae and the presence of two oesophageal teeth situated shortly behind the nerve ring.

### Introduction

The species which are described in this paper occur commonly and in considerable numbers in the stomach of the Tamar on Kangaroo Island. They were taken in the course of a quantitative analysis by Mrs Lesley Smales of the nematodes present at different times of the year in the stomach of this host, undertaken as part of work for a Ph.D. degree in the Department of Zoology.

Types of the new species will be deposited in the South Australian Museum; paratypes are in the Helminthological Collection of the Zoology Department, University of Adelaide.

Measurements of the two species are given in Table 1.

*Cloacina smalesae* n. sp.

### FIGS 1–7

*Host and Locality:* *Macropus eugenii* (Desmarest), from Kangaroo I., S. Aust.

This is a medium-sized species of *Cloacina*, with markedly swollen cuticle at the anterior end. The thickness of the cuticle increases from the level of the posterior end of the oesophagus to the base of the mouth collar, which it surrounds like a platform. The mouth collar is well developed and slightly lobed anteriorly; it bears the four submedian cephalic papillae and two amphids. The distal segment of each cephalic papilla is longer and slightly thicker than the proximal segment. Each element of the leaf crown is domed anteriorly and is without the unguiform anterior projection usually present in species of this genus.

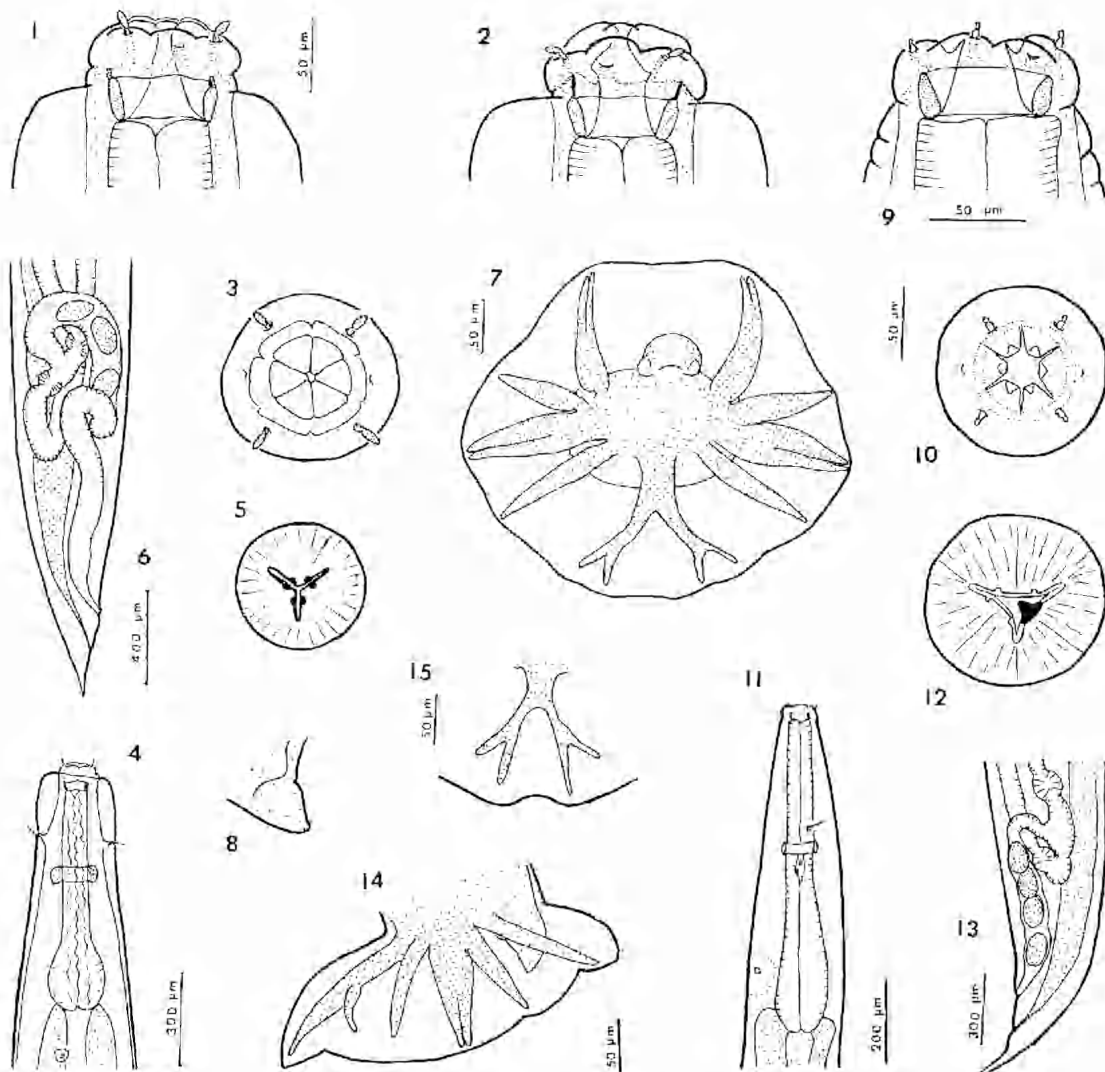
The buccal ring is circular and stoutly built. Its anterior and posterior walls are slightly lobed (Figs 1, 2). The oesophagus is cylindrical for most of its length, ending in a small swelling. There are no oesophageal teeth. The thickened lining of the lumen is unusually distinct, appearing in the whole mount as three wavy longitudinal lines throughout the length of the oesophagus. In transverse section the lumen appears triradiate with a thickening of the lining in the midlength of each arm. The nerve ring lies at about midlength of the oesophagus. The excretory pore is postoesophageal, and the cervical papillae lie a little distance in front of the nerve ring.

The bursal lobes are only slightly divided. The arrangement of the rays (Fig. 6) is typical for the genus. The genital cone is not prominent; it bears a small ala on each side of the cloaca, but no other appendages. The spicule is a little less than half the body length.

The tail of the female is conical, ending in a point. The vulva is slightly less than a tail length in front of the anus. The ovejectors unite 6–7 tail lengths in front of the vulva, and the vagina curves forwards before passing back, with one or two twists, to the vulva.

The rounded elements of the leaf crown seen in this species have been described in only one other species, *C. longilabiata* Johnston & Mawson, 1939b (syn: *C. minor* J. & M., nec. Davey & Wood, 1938). However, in *C. longilabiata* the vagina is shorter, the cephalic papillae are of a different shape and there is no cuticular inflation at the anterior end.

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Figs 1-8. *Cloacina smalesae*. Fig. 1.—Anterior end, lateral view. Fig. 2.—Anterior end, showing leaf crown in everted position. Fig. 3.—Anterior end, *en face*. Fig. 4.—Oesophageal region. Fig. 5.—Transverse section of oesophagus, anterior to nerve ring. Fig. 6.—Posterior end of female. Fig. 7.—Bursa, flattened out and viewed from the inside. Fig. 8.—Lateral view of genital cone. Figs 1, 2, 3, 5 and 8 to same scale.

Figs 9-15. *Cloacina kartana*. Figs 9 and 10.—Sublateral and *en face* views of anterior end. Fig. 11.—Oesophageal region. Fig. 12.—Transverse section of oesophagus, showing one oesophageal tooth. Fig. 13.—Posterior end of female. Fig. 14.—Bursa. Fig. 15.—Dorsal ray. Figs 10 and 12 to same scale.

***Cloacina kartana* n. sp.**

FIGS 8-14

*Host and Locality*: *Macropus eugenii* (Desmarest), from Kangaroo I., S. Aust.

This is a medium-sized species of *Cloacina* with a well developed mouth collar bearing the four small submedium cephalic papillae and the amphids. The cephalic papillae are small;

the proximal segment is longer and slightly thicker than the distal one. The buccal ring is stoutly built, and is thicker posteriorly than anteriorly. The six elements of the leaf crown do not, in the resting position at least, project above the collar.

The oesophagus is cylindrical for most of its length, with a terminal bulb. There are two small subventral oesophageal teeth, one a little

TABLE 1

*Measurements of Cloacina smalesae and C. kartana; in  $\mu$ m unless otherwise stated.*

	<i>C. smalesae</i>		<i>C. kartana</i>	
	♂	♀	♂	♀
Length (mm)	9.5-11.4	13.0-15.8	8.0-10.9	12.4-17.0
Oesophagus	690-720	710-790	680-790	810-900
Antr. end—nerve ring	360-400	360-490	300-350	340-400
—cerv. pap.	200-230	160-200	220-300	250-300
—excr. pore	790-870	910-1000	600-740	700-800
Spicule length	4200-4700	—	1400-1600	—
Length/spic. l.	2.2-2.5	—	5.7-7.1	—
Length/oesoph.	13.8-16.0	16.8-21.8	10.6-16.0	14.3-20.9
Tail	—	220-260	—	200-300
Postr.—vulva	—	350-490	—	380-500
Egg length x breadth	—	170-175x85-90	—	180-185x85-90

posterior to the other, at about midlength of the oesophagus, and shortly behind the nerve ring. The cervical papillae lie just in front of the nerve ring, and the excretory pore is at the level of the oesophageal bulb.

The spicules are relatively short. The lobes of the bursa are distinct but not deeply separated. The rays are arranged as shown in Figs 13 and 14. The genital cone is small and no appendages were seen on it.

The female tail is conical, ending in a narrowed point. The vulva lies a little less than

a tail length in front of the anus; the vagina, which is straight, extends about 3-4 tail lengths in front of the vulva.

The species most closely resembles *C. obtusa* Johnson & Mawson, 1939a, but differs in the spicule length.

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